

ABSTRACT

According to an embodiment, a semiconductor die has a source bond pad and a destination bond pad attached to a top surface of the semiconductor die. A stud bump is situated on the destination bond pad. A bonding wire is then ball bonded to the source bond pad and thereafter stitch bonded to the stud bump on the destination bond pad. The bonding wire acts as an off-chip inductor or a portion of an off-chip inductor. In one embodiment a number of bonding wires and on chip conductors are used to form an off-chip inductor. The inductance of the off-chip inductor can be adjusted or fine-tuned by adjusting a loop height of the one or more bonding wires used in the off-chip inductor.

10 The inductance of the invention's off-chip inductor can also be adjusted by increasing or decreasing the number of bonding wires used to form the off-chip inductor.

U.S. GOVERNMENT USE